

## COMMISSIONER SIMINGTON ADDRESSES INCOMPAS POLICY SUMMIT

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Thank you for that kind introduction, Chip, and for the opportunity to speak here today.

Today, I'd like to focus on the future of 5G as a technology which I think could revolutionize private networking in the U.S. and allow this country to strengthen its international position in manufacturing.

Apart from its benefits to consumers, I know that many policymakers are counting on the 5G revolution to create new application frameworks and new industrial possibilities. Non-phone, non-consumer cellular devices are a product category that go from niche to viability at scale through 5G's capacities in latency, density, multiple planes, and network edge intelligence. But precisely because they are a new product category dependent on sophisticated and capital-intensive network infrastructure, we have to ask how we get from a consumer-facing cell network, and the businesses that grew up around it, to the non-consumer uses that show such potential.

If consumers see benefits from 5G, network infrastructure companies like telcos, tower companies and tower equipment companies will have the money to keep building the networks we need to support a new generation of business and public safety applications—just as we're starting to see in countries like China, where 5G has a head start. So, to get economies of scale and pervasive network availability, we need to find smarter ways to monetize 5G in the short-term, so that the technology can be more broadly deployed and for alternative uses. That is where an exclusive use-licensing model can and must play a starring role.

However, I also I think that tweaking spectrum policy frameworks, over time, incrementally, may also expedite this 5G transformation.

It seems that every day I hear a new story about new industrial and manufacturing applications of 5G private networking, which is music to my ears—yet while I hear these stories, I also hear about how little spectrum the U.S. has available to fully deploy 5G to its fullest potential, and how companies engaged in 5G manufacturing applications sometimes find it easier to deploy them over shared spectrum.

INCOMPAS and some of its members have made intriguing proposals about fixed wireless use of certain bands. These could support the growth of industrial 5G private networks. With regulatory engagement, 5G industrial networks could become a product category, and a national capacity, that is completely distinct from the more familiar consumer applications of 5G. The FCC is still committed to consumer 5G spectrum commercialization, and I don't think we have to choose between two models; instead, we have to look at every option and every model that is likely to enable growth, and we have to allow the private sector to explore a variety of technological options.

Recent filings by INCOMPAS, calling for the FCC to allow for fixed wireless deployment in the 37 GHz band is one such proposal. And several large carriers have already employed their millimeter-wave licenses in the operation of fixed wireless 5G networks. Right now, these are primarily for consumer broadband, but the subscription add rates are impressive. It is also much easier to share among fixed wireless service providers, and among terrestrial and satellite service providers, when terrestrial networks are allocated for fixed use. So I definitely think industrial 5G and private networks are something that are just over the horizon for fixed wireless deployments and in bands where sharing is the only feasible option.

Another example I think we can point to is the 12.7 to 13.2 GHz band. Per the FCC's NOI, the band is currently prevalently used by incumbents for fixed deployments. So it seems to me the fastest and easiest way to make the band available for commercial use is for the FCC to closely study proposals to allocate the band for terrestrial fixed wireless use. I don't yet think the evidence is in on whether this is the highest and best use for that band, nor am I saying that a mobile allocation should be left off the table. But given the nation's mid-band spectrum shortage, and the roaring hum of the arguments for moving to a shared spectrum model, it is easier to envision sharing between and among private fixed wireless networks than it is between and among mobile networks, where exclusive-use licenses are best.

We don't need to make a binary choice between exclusive-use, full-power licensing in mid-band and greater availability of shared, unlicensed, or license-light spectrum. Instead, we need to have the will and conviction to bring more 5G-suitable spectrum to the private sector under all models. I'm sure you can all easily imagine network engineering models that integrate aspects of multiple access approaches, so that, for example, there is seamless handoff between on-site networks and geographically dispersed ones, or between low-latency networks in one facility that are physically proximate to different suites of intelligent edge equipment optimized for different purposes. The federal government must remain amenable to a changing landscape in the face of a spectrum shortage and evolving technology uses, and we must continue to engage with the private sector to make sure that we aren't irrelevant.

And I wouldn't be me if I didn't also take this opportunity to pitch how market standards for receivers moving towards more spectrum efficiency will make spectrum mining, as it were, much easier. It's easy to understand why the FCC has always regulated the transmission side, not the reception side. And yet, thinking in terms of policy tools, it's distorting to focus entirely on transmitters when we do nothing to ensure that the other end—receivers—have incentives to ensure they operate efficiently. By now, it's hard to deny that we have a history of annual spectrum fights between the commercial and federal sectors. But don't panic—the FCC recognizes that receiver standards or any other “build to spec” provisions would do more harm than good, and we want to make sure that industry has extensive input on how to scope and implement receiver improvement incentives, and also on where such incentives are and aren't necessary.

My office is hopeful that an NPRM will come in the very near term in the receivers proceeding, and as I've said in these circles before, we are big proponents of a “property-rights” model for governing receivers that is not dissimilar to how the FCC currently governs the interference protection of transmitters. And most of the NOI comments that pushed back on

FCC action were concerned about a “one-size-fits-all” approach, or one that is not specific enough to prevent chilling innovation and investment.

In order to address these overarching concerns in the record we believe a framework that sets up a process or procedural rules—for the FCC to begin addressing the receiver side of the equation when it explores future spectrum bands—is the best approach. This approach would allow for the adoption of *band specific* rules that carefully consider the operations of the specific incumbent receivers operating *only* in that band. This allows for a full discourse that will ease the concerns of industry before any action is taken.

Once a band is allocated for commercial use, this framework would then allow the FCC to craft technical parameters—otherwise known as “service rules”—just the same as it always has in every other proceeding. However, those service rules would be applicable to both transmitters and receivers in a given band and would govern the operational characteristics of the band. These parameters would become part of the FCC’s standard analysis when considering a new band for commercial use.

This approach allows for the same amount of industry feedback as the FCC’s procedures currently allow because the FCC would, as always, seek comment on the service rules for each new or repurposed commercial band through notice and comment rulemaking. That process would not change. It would just be expanded to seek comment on parameters applicable to receivers. So hopefully more to come soon on this front.

And with that I’ll take a breath to say thank you for asking me to join you today. Enjoy the rest of the policy summit.